

A pilot study exploring Australian general practice nurses' roles, responsibilities and professional development needs in well and sick child care

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Abstract

Aim Explore practice nurses' (PNs) role in child health and development, and advising parents about child health issues.

Background Introduction of the four-year-old child health check into general practice in 2008 placed additional responsibilities on PNs in child health and wellness. This study explores their readiness to expand their practice into this area.

Design Integrated mixed method design, self-report survey.

Method A purpose-developed questionnaire explored demographics, child health roles and responsibilities, difficulties encountered, professional development needs, barriers and facilitators, and professional development activities undertaken in the past year. Surveys were posted to 218 PNs in one rural Division of General Practice (DGP) in Queensland, Australia; 29 responded.

Results PNs reported a significant role in well and sick child care (93.1%) though few had a paediatric/child health background (14.3%). Roles included immunisations (92.3%), child health checks (65.4%), general child health and development (26.9%), asthma (23.1%), feeding (15.4%), fever (11.5%), settling/sleeping (11.5%). PNs were interested in learning more about (81.5%) and incorporating more child health into their practice (81.5%). Professional development in childhood growth and development (80.0%), health and illness (60.0%) and advising new mothers (20.0%) was needed.

Conclusions PNs play a substantial role in child health, are unprepared for the complexities of this role and have preferred methods for undertaking professional development to address knowledge deficits.

Implications for practice PNs are unprepared for an advanced role in child health and wellness. Significant gaps in their knowledge to support this role were identified. This ever-expanding role requires close monitoring to ensure knowledge precedes expectations to practice.

Keywords: Primary health care, professional development, nurses' professional role, child health.

What is known about this topic

- Government priorities and geographical setting determine roles and responsibilities of nurses in general practice.

What this paper adds

- Identification of the need to ensure all PNs are upskilled prior to implementation of Medicare items related to their practice in general practice settings.

- PNs are interested in expanding their child health and development role.
- PNs have significant knowledge deficits in childhood growth and development, child health and illness and in advising parents.
- PNs' current care of children in the general practice setting.

Declarations

Competing interests None.

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Introduction

Improving equitable access to health care services in rural and remote areas in Australia was the impetus for expanding and defining the role of nurses employed in general practice settings, a previously unrecognised nursing speciality^{1,2}. Shortages in the general practitioner (GP) workforce, increasing numbers of people living with chronic conditions, and patient expectations² influenced this movement. This paper reports findings from a pilot study exploring the expanding role of practice nurses (PNs) into child health and development (CH&D) following the introduction of the The Healthy Kids Check initiative in 2008, where the basic four-year-old child health checks, previously undertaken by child health nurses, were to be undertaken by nurses in general practice settings.

Background

The national Nursing in General Practice (NiGP) initiative, a four-year program, began in 2001 to improve access to medical services in rural and remote areas of Australia through the employment of nurses to assist in chronic disease management¹. Incorporated in the initiative were significant financial incentives for rural/remote GPs to employ PNs. Necessary funding for professional development and skill training was provided to ensure PNs were competent in their new and/or expanded role. The Australian Practice Nurses Association (APNA) professional organisation was founded that same year, and practice nursing became recognised as a distinct nursing speciality; it is now acknowledged as an essential component of Australian primary health care¹. The NiGP initiative was so successful it was expanded to provincial and finally metropolitan areas.

In 2004, four distinct core roles for PNs were identified: clinical care (for example, assessing sick patients, pulmonary assessments), clinical organisation (for example, chronic disease management, triage), administration (stock management, receptionist duties), and integration (liaising with other services)¹ similarly to other studies^{3,4}. Most Australian PN research focuses on demographics, roles and activities, and describing the collaborative work between PNs and GPs⁵. However, PN roles vary with patient demographics; for example, with mostly older patients they may focus more on chronic disease management; with high proportions of young families they may focus more on immunisation and CH&D issues².

An Australian Government-commissioned study in 2005 confirmed the efficacy of PNs in chronic disease management². Employment of PNs improved the quality, access and affordability of primary health care, and correlated positively with improved patient throughput and reduced waiting times. Further government initiatives supported the expansion of PNs' roles. For example, the MedicarePlus Package (2004) extended employment incentives of the NiGP initiative to metropolitan areas. Further extension of the NiGP initiative (2005) for training to identify and respond to domestic violence in rural and remote areas²; and the release

of Medicare Benefit Schedule item numbers (2004) for PNs to provide, on behalf of GPs, immunisations and wound care. In 2005 Pap smears and chronic disease management were included^{2,6} and, in 2008, through The Healthy Kids Check initiative, the basic four-year-old child health checks that were previously undertaken by child health nurses⁷. There is a potential for all PNs in general practice settings to conduct this check depending on their practice guidelines.

There are now nearly 9000 PNs Australia-wide, with an anticipated increase per year by 500⁸. The proportion of GP-patient encounters involving PNs doubled between 2005 and 2006 (4.2%) and 2008 and 2009 (9.0%), with PNs now involved in 10.5 million encounters annually⁹. Approximately 60% of general practices now employ a PN⁸.

Child health role

Prior to 2008, Australian PNs' roles targeted mostly adult patients, with immunisation their main role in child health. Introduction of the four-year-old child health check required PNs to be knowledgeable about the health and development of children — an area traditionally undertaken by child health nurses in state-funded community clinics^{10,11}. Some child health knowledge may have been presumed, as several Australian PN core activities target areas of child health — namely, wound care management, immunisation recall and management, patient counselling, asthma education, lactation support, and child health assessments¹. Many PNs who work in areas with young families include immunisation and child health issues in their role².

In Australia, children under the age of five years account for 68.4% of the total allocated health expenditure for Australian children (younger than 15 years of age), representing a significant proportion of Australian health care costs¹². Increases in dual-income and single-parent families influences parents' access to traditional CH&D assistance through state-funded child health clinics. In 2009–10, 63% of both parents and 62% of parents in single-parent families with children under 15 years of age were in paid employment; both parents were employed in 49% of Australian families with a child 0–4 years of age¹³. Also affecting parents' access to child health services is the reduction and redistribution of child health resources to focus on families "at risk" from factors identified as predicting poor childhood outcomes such as learning difficulties and delinquency^{10,14}. These changes raise questions about child health nurses ability to, with their limited resources, provide necessary assistance to "low risk" families^{10,14}, despite new models of care such as "drop in"¹⁰ and "open plan"¹⁴ clinics currently being evaluated. Changes in child health nursing's focus, and increases in working parents, reduce access to health professionals for CH&D advice. PNs in general practice settings are ideally placed to assist many families in the area of CH&D, especially in areas with high proportions of young families.

Development of the PN role in Australia has been successful. Changes in Australia's social structure, and economic environment and the needs of Australian parents indicated the timeliness for another expansion of the PNs' role into child health. The introduction of the four-year-old health check evidenced the need to offer an accessible alternative service to child health clinics. Most recently, plans to redesign

the four-year-old health check as a three-year-old check including assessment of the child's emotional wellbeing¹⁵ further highlights the need for PNs to be able to adapt to, and meet the demands of, their evolving CH&D role.

Methods

An integrated, mixed method design was used for this exploratory, cross-sectional study. As this is an area with no previous research and the authors were interested in reaching all PNs in a Division of General Practice (DGP) with a large geographical base, a qualitative study may not have been appropriate. Therefore, a mixed method instrument was designed to gain both qualitative and quantitative data, enabling triangulation of data¹⁶. Qualitative data were collected where no previous knowledge of the item of interest existed; for example, PNs' role in child health and wellbeing. Quantitative data were collected relating to demographics, interest in further developing a child health role, and satisfaction in their role.

Aims

The aims of this pilot study were to explore the role of PNs in child health and development, and their role in advising parents about child health issues. Key aims were to identify: (i) roles and responsibilities of PNs in advising parents about well and sick child health care in, for example, breastfeeding, immunisation, fever management, and medication dosage and administration; (ii) professional development needs; (iii) barriers or facilitators to PNs' professional development; and (iv) role satisfaction.

Ethics

Ethical approval was obtained from the Queensland University of Technology, University Human Research Ethics Committee (approval number 0800000618).

Participants

All 218 PNs employed within a DGP in a regional area of Queensland, Australia, were eligible to participate in this study. This DGP covered diverse economic and social groups, with a large geographic area, approximately 7000 km², encompassing Rural, Remote and Metropolitan Areas (RRMA)¹⁷ classification areas 3 to 5 (rural). Questionnaires, study information and reply-paid envelopes were mailed from the DGP to all eligible participants at their place of employment. Return of a completed questionnaire was considered consent to participate. Completed questionnaires were returned by 29 PNs, representing a response rate of 13.2%, comparable to that seen in previous research with nurses¹⁸, from the beginning of October through to the end of November 2008.

Instrument

An instrument was developed from literature reporting PNs' involvement in child health and child health education, and previous research by one of the authors with child health and school-based youth health nurses^{19,20}. Content and face validity of the instrument was assessed by a clinician and an academic, both with expertise in practice nursing, child health and questionnaire development. The final version with 71 items was comprised of six sections, four of which were open-ended questions.

Section 1: (14 items) collected demographic information including professional development, years in nursing and perceived speciality area in nursing and so on

Section 2: (12 open-ended items) gathered information about PNs roles and responsibilities in CH&D and the frequency of these during the past week (see Figure 1 for an example).

Section 3: targeted professional development in both child (eight open-ended items) and general health (nine open-ended items) attended during the past year and attendance method and funding source.

Section 4: (six open-ended items) targeted difficulties encountered in relation to providing care for sick and well children and the preferred education to address the difficulty, preferred educational mode (one item) and time of day (four items).

Section 5: (11 items) explored barriers and facilitators to learning about child health; three items in this section explored interest in learning about, including online learning, and incorporating more CH&D into their practice.

Section 6: workplace satisfaction was assessed using a seven-point Likert scale 1=very dissatisfied and 7=very satisfied, previously used in nursing research (10 items)²¹.

Roles (Please list the major roles associated with your position)	Responsibilities including parent education (Please outline in summary)	Frequency (Approx. per week)	
		In person	By phone
For example: Immunisation	Give the injection Record immunisation in the chart and on the national register	5 times	Nil
Immunisation	Educate parents about post-immunisation care	8 times	6 times

Figure 1: Example survey item exploring the roles and responsibilities of PNs in well and sick child care

Data analysis

Analyses were performed using SPSS 15.0²². Data from open-ended items were coded prior to entry; both authors cross-checked codes. Data were then double-entered and cross-checked for entry errors using SPSS Data Entry Builder 4.0²³. Descriptive statistics summarised the characteristics of the sample. Frequency distribution of all variables was examined to determine distribution of data.

Results

Respondents (n=29) were aged between 31 and 61 years (47.2±7.6), female (96.6%, 28) and had been responsible for the care of a child (excluding nursing care) on a daily basis (96.6%, 28). A diverse range of clinical nursing backgrounds and academic qualifications were reported (Table 1). Few PNs reported a paediatric or child health nursing background or held postgraduate qualifications in general practice nursing. There were 28 registered nurses (96.6%) and one (3.4%) enrolled nurse with a mean 23.7 (SD=9.0) years' professional nursing experience, and 6.7 (SD=6.9) years' general practice nursing experience. Employment was mostly part-time (51.7%, 15), with 27.6% (8) full-time, and 20.7% (6) who worked casually. Geographical location of respondents, according to the RRMA classification was 3.4% from a capital city (1), 15.6% from a large rural centre (3), 34.5% from a

small rural centre (4), 44.8% from other rural centre (5)¹⁶. Most (72.4%, 21) had undertaken at least one course related to CH&D. Immunisation (62.1%, 18) was most frequently reported along with maternal and child health (31.0%, 9), asthma (6.9%, 2), diabetes education (3.4%, 1), and wound care (3.4%, 1).

Table 1: Participants' clinical and educational backgrounds n=29

Clinical background †	%	n
General hospital	35.7	10
General practice	28.6	8
Maternity	17.9	5
Aged care	17.9	5
Paediatric and child health	14.3	4
Accident and emergency	14.3	4
Specialist areas	14.3	4
Community	14.3	4
Immunisation	3.6	1
Highest level of nursing education†		
General hospital certificate	14.3	4
Post-registration certificate	7.1	2
Diploma/degree	42.9	12
Postgraduate certificate	35.7	10
Postgraduate certificate in practice nursing		
Yes	24.1	7
No	69.0	20
Currently enrolled	6.9	2

†n=28 (1 missing response)

Child health and development roles and responsibilities

Nearly all had a significant role in well and sick child care (93.1%, 27), were interested in learning more about CH&D (81.5%, 22) and incorporating more child health activities into their practice (81.5%, 22). Respondents engaged in many roles related to CH&D in the previous week (Table 2). Many were for immunisations or child health checks. Others were for general health advice, asthma care, infant feeding, fever management, settling or sleeping problems, and adolescent mental health counselling. In these roles, PNs had a wide range of responsibilities (Table 2). These responsibilities included well and sick childcare, educating, advising, and counselling. Figure 2 displays in-depth PNs' responsibilities related to child immunisation, which is their main role.

Educate parents regarding immunisation schedule
Educate parents regarding importance of fully immunising their child
Check immunisation records of overseas migrants
Write up immunisation schedule for migrant children
Compile list of children due/overdue for vaccination
Contact parents for immunisation reminders/recalls
Develop "catch-up" immunisation schedules
Gain parental consent for immunisation
Give immunisation injection
Educate parents regarding post-immunisation care
Educate parents on potential adverse effects of immunisation
Record immunisation in patient file
Record immunisation on register
Post migrant immunisation history forms to Medicare
Check that the ACIR/VIVAS/Centrelink/Medicare information is correct at parent request, if benefit payment has been stopped

Note. ACIR: Australian Childhood Immunisation Register; VIVAS: Vaccination Information and Vaccination Administration System.

Figure 2: Responsibilities related to child immunisation role

Professional development needed

Most identified a need for professional development in growth and development (80.0%, 12), child health and illnesses (60.0%, 9) and advising new mothers on feeding, sleeping and settling (20.0%, 3). Antenatal care (13.3%, 2), nutrition and lifestyle choices (13.3%, 2), school-aged child and adolescent health care (13.3%, 2), immunisation (13.3%, 2), and child behavioural problems (6.7%, 1) were also identified.

Nurses identified a need to keep up to date with current information, that there was a gap in the timely sharing of patient information between tertiary and primary care, making it difficult to care for children recently released from hospital. Other PNs found it difficult to answer growth and development queries and trying to find the time to attend child health meetings and courses (Table 3).

Professional development previous year

Professional development activities attended during the previous year favoured adult health; 71.4% (20) had attended at least one adult health activity in the previous year (2.1±2.1). Fewer (58.6%, 17) had attended activities targeting CH&D (1.0±1.1), with immunisation reported most frequently (60.7%, 17). One-third, 41.4% (12) were contemplating a child health/development-related course.

Barriers and facilitators to attending professional development

Most PNs (72.4%, 21) reported barriers to attending professional development that aligned with well-documented barriers^{24,25}: lack of time (37.9%, 11), family commitments (37.9%, 11), travelling distance required (17.2%, 5) and financial constraints (13.8%, 4).

Many (68.2%, 15) identified factors facilitating professional development. For example, employers encouraged continuing education (54.5%, 12). Some had access to local (27.3%, 6), reasonably priced (4.5%, 1) courses; internet (13.6%, 3) and library (4.5%, 1) access; and workload relief (4.5%, 1).

Attendance at professional development

Of note is that PNs attended professional development in their own personal time. PNs attended both child and adult health professional development in their own time, not in work time. This was the case for both child (65.4%, 17) and adult health (71.2%, 37) professional development activities. Personal funds were used. Half partially or wholly funded child (48.0%, 12) and adult health (55.4%, 31) activities; employers funded one-third of child (28.0%, 7) and adult/general health (32.1%, 18), and external sources provided funding for one-quarter of the child (24%, 6) and adult/general professional development activities (12.5%, 7). External sources included scholarships from professional organisations (for example, Australian Practice Nurse Association, Divisions of General Practice) and other organisations (for example, Lifeline).

Membership in professional organisations provided useful child health information (85.2%, 23), addressing some professional development and continuing education needs (82.6%, 19). Those with access to professional literature in their workplace found this useful (87.5%, 14). Of concern is

Table 2: Nursing roles related to child health and development undertaken by PNs during the previous week n=26

	%	n	Total per week	Most frequent responsibilities related to role
Immunisation	92.3	24	297	Gain parental consent for immunisation Give immunisation injection Parent education on post-immunisation care
Child health checks	65.4	17	118	Address parents' concerns about development Check child's head circumference Check child's height
General advice/care	26.9	7	56	Check if child is well Provide handouts, brochures and websites with health information Dress wounds and educate parents on wound care
Fever management	11.5	3	31	Discuss fevers, reassure parents about fever Monitor fevers Educate parents on medications, other methods of reducing fever, hydration, when to go to hospital
Asthma care	23.1	6	15	Educate parents on asthma signs, symptoms and triggers Educate parents on asthma medications and correct usage Educate parents on use of asthma devices
Feeding problems	15.4	4	12	Provide breastfeeding information Discuss lactation problems, attachment correction Address concerns on feeding/feeding solids
Settling/sleeping problems	11.5	3	10	Educate parents on the importance of routine Educate parents on checking if the child needs to be fed or changed Educate parents on bedding and room temperature
Counselling	7.7	2	16	Discuss adolescent health issues with parents Discuss adolescents and bullying at school Discuss adolescent issues such as contraception choices with parents

Note. Figures indicate percentage and number of PNs reporting the role during the previous week. n=1 missing responses; n=2 participants reporting no roles related to child health and development due to GP preferring to see child patients.

that half the PNs (53.6%, 15) had no access to professional journals or newsletters in their general practice setting.

Preferred modes of professional development

Modes of professional development preferred by PNs were workshops (66.7%, 18), seminars (51.9%, 14), conferences (48.1%, 13), continuing education articles (48.1%, 13), online, self-paced modules (37.0%, 10), small group updates (33.3%, 9), distance education (29.6%, 8), and short, self-paced courses (22.2%, 6). Interestingly, university courses were the least preferred mode of continuing education (3.7%, 1). Most (66.7%, 18) expressed interest in online professional development. Additionally, to promote their child health role, PNs identified a need for GPs to become aware of their registration requirements relating to continuing education (36.4%). Other suggestions were access to state updates and education (18.2%), videos on educating parents (18.2%) and child health courses (15.5%).

Table 3: Difficulties related to the role in child health and development n=17

	%	n
Taking time off for child health meetings/courses	37.5	6
Keeping up to date with current information	31.3	5
Gap between hospital and community care	18.8	3
Growth and development queries	12.5	2
Four-year-old check education before doing checks	12.5	2
GPs' medical/legal concerns	12.5	2
Confidence in advising parents — refer to GP	6.2	1
GP addressed child health and development issues	6.2	1
Loss of income when attending child health courses	6.2	1
Community opposition to immunisation	6.2	1
Isolated work environment	6.2	1

Role satisfaction

Respondents rated their satisfaction with various aspects of their PN role. They were least satisfied with remuneration, potential to expand their scope of practice, opportunities for professional development, and encouragement to undertake continuing education (Table 4).

Table 4: Satisfaction with various aspects of the PN role n=29

	M	SD
Relationships with co-workers	5.7	0.9
Flexibility of working hours	5.3	1.1
Quality of supervision/assistance available	5.3	1.4
Current position†	5.3	1.0
Work	5.2	1.3
Security the position provides	5.1	1.5
Encouragement to undertake continuing education	4.3	1.8
Opportunity for professional development	4.1	1.7
Potential to expand scope of practice	3.9	1.9
Remuneration	3.7	1.9

Note. Response scale ranges from 1 (very dissatisfied) to 7 (very satisfied).
†n=28 (1 missing response).

Discussion

PNs have an extensive role in the primary health care of children and families, covering well and sick child care as well as advising, educating and counselling parents on CH&D issues from birth through to adolescence. Although significant proportions of PNs' work time was related to CH&D, the quality of care provided by PNs is largely contingent upon the education, training and ongoing professional development opportunities available to them to support their roles¹. It is concerning, given the limited preparation for the CH&D role reported in this survey, and that professional development activities undertaken by the PNs may be inadequate to support evidence-based practice in this area.

Although keen to expand their role in CH&D, PNs identified a need for additional education and professional development

across many areas. While barriers to accessing professional development were congruent with those reported in previous research^{24,25}, it is notable that these PNs were working in predominantly rural areas. Half the PN workforce in Australia practise in regional, rural or remote areas²⁶. Barriers such as isolation and travelling long distances to access professional development are highly relevant. It is essential that strategies to improve access to continuing CH&D education are designed to limit the impact of geographical and professional isolation on practice.

Online courses, and internet and library resources may support PNs in maintaining current CH&D knowledge on which to base their practice. However, difficulties with computer access, limited broadband access and lack of information technology skills are significant barriers to rural PNs accessing online educational resources²⁷. Barriers of family and work commitments highlight the importance of offering professional development activities in easily accessible modes. Existing resources, such as DVDs of paediatric and child health conference presentations, could be made available at minimal cost to PNs who are unable to attend professional development activities in person, and may provide an alternative to those with limited computer or internet access.

Finally, employers who encouraged professional development were considered important facilitators of ongoing professional development. Unfortunately, PNs reported low satisfaction with and lack of encouragement to undertake continuing education/development, and potentially expand their scope of practice. While the initial cost of providing development opportunities to NPs in terms of time and resources could be significant, practices need to recognise the clear benefit that up-to-date, skilled PNs offer their organisation and their patients. Encouraging and assisting PNs to seek external funding (for example, scholarships) to pursue professional development opportunities is essential.

Strengths and limitations

The sample, though small, was from an area comparable to many of the Australian Divisions of General Practice, validating the use of an integrated, mixed method approach. PNs who responded may have a specific interest in child health or work in a setting with many young families. Findings highlight the need for further exploration of this area.

Implications for clinical practice

As primary health care practitioners, PNs are ideally placed to assist new parents to adapt to their new role, providing CH&D support to those unable to access traditional government-provided child health services. The introduction of the four-year-old health check has the potential to bring PNs into contact with more parents and young children, possibly a new cohort. These checks offer an ideal opportunity to explore parents' health and developmental concerns, answer questions and refer to other health practitioners when necessary. Access to evidence-based child health information is essential to fulfil this role. General practice managers/practitioners need to be aware of the important benefits from ensuring PNs access to continuing professional development but also that it is now an essential part of their ongoing registration. Those working in government hospitals receive

a professional development allowance — is it now time for primary health care nurses to receive similar support.

Conclusion

PNs are unprepared for their role in CH&D and need substantial additional support to provide high-quality, evidence-based care to children and families. Much of their professional/continuing education is self-funded and undertaken in personal time. This survey identifies the need for further exploration of this area. It identified PNs' role in CH&D and provides the grounding to develop an instrument to explore Australian PNs' roles in well and sick child care. Due to their lack of preparation for, and predicted expansion of this role, with the three-year-old child health check in 2012–2013²⁸, further exploration of and identification of appropriate and timely modes of education are essential. This ever-expanding role requires close monitoring to ensure knowledge precedes expectations to practice.

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